Ann. Natal Mus. Vol. 34(1) Pages 19–30 Pietermaritzburg October, 1993

Teratocamilla, a new genus of Camillidae (Diptera) and two new species of *Camilla*, from southern Africa

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ABSTRACT

A revised key is given to the genera of Camillidae represented in southern Africa. *Teratocamilla* gen. n. is described for a new species (*sineseta*) from South Africa. The genus is considered to be closely related to *Afrocamilla* Barraclough, but is strongly distinguished on characters of the male and female postabdomen. *Teratocamilla sineseta* is the first named species of Camillidae which lacks proclinate orbital bristles. Two new species of *Camilla* Haliday (*capensis* and *manningi*) are described from the southwestern Cape Province, and a key to distinguish them is presented. Both species are separated from all others by lacking a dorsal pre-apical bristle on the mid tibia. Most of the specimens of *C. manningi* were collected from faecal pellets of the rock hyrax *Procavia capensis* (Pallas). This is the first record of *Camilla* from the Afrotropical Region and the southern hemisphere. The disjunct distribution is discussed.

INTRODUCTION

This is the second in a series of papers treating the southern African Camillidae. My first paper (Barraclough 1992) reviewed the taxonomy and biology of the world fauna and described the new genus *Afrocamilla*, based on *Camilla armata* Hackman, 1960 and *A. stuckenbergi* Barraclough, 1992 from South Africa. Since that time, a substantial number of Camillidae have been either collected in Natal or discovered in the unsorted section of the Natal Museum's Diptera collection. Part of this material is treated in this paper, although it is now certain that *Afrocamilla* is more speciose than previously known and as many as four new species await description. Further taxonomic work on *Afrocamilla* is delayed until more comprehensive collecting has been undertaken.

A study of the female postabdomen of *Camilla*, *Afrocamilla* and *Teratocamilla* now suggests that the latter two genera are distinguished from *Camilla* by the presence of a sclerotised ventral receptacle. From the literature (Papp 1982 1984, McAlpine 1987) it is evident that the type species of *Camilla, C. glabra* Fallén, lacks a sclerotised receptacle. I have confirmed this by dissection of *Camilla acutipennis* (Loew) and *C. pruinosa* Duda. All these species have a pair of small, weakly sclerotised spermathecae. I have also dissected a single female of *Camilla manningi* sp. n., and neither a ventral receptacle nor noticeably sclerotised spermathecae are evident. The female postabdomen of *C. manningi* is otherwise very similar to that of *C. glabra.*

As three of the four extant genera of Camillidae are endemic to subsaharan Africa, I suggest that Africa is the centre of distribution of the family. On current evidence there are as many as 9 species in southern Africa, and I would expect 10 to 15 additional species (predominantly *Afrocamilla*) from the rest of Africa. The Afrotropical fauna may (in terms of species) be more than double that of the

Palaearctic Region (11 named species of *Camilla*). It is not surprising that *Afrocamilla* and *Camilla* have previously not or barely been collected in Africa, as the immature stages evidently develop mainly in the faecal pellets of hyraxes (*Procavia* species), and adults have only been found at or adjacent to hyrax latrines. In addition, such latrines are virtually always located in relatively inaccessible areas such as rocky outcrops and hillsides, within piles of loose boulders, or in caves. Stuckenberg (1982) stated that the Afrotropical Region may prove to be the source of many flies in other regions. This is likely to be true of the African Camillidae.

MATERIALS AND METHODS

This study was based on the examination of pinned adult Camillidae from the following depositories:

Natal Museum, Pietermaritzburg, South Africa (NMSA)
The Natural History Museum, London, United Kingdom (BMNH)

Morphological terminology mainly follows that of Barraclough (1992). Bilaterally symmetrical structures are described in the singular. The male is always described first and only differing character states are cited for the female. Holotype label data are quoted exactly as they appear, sometimes with supplementary information in square parentheses; a slash (/) denotes the end of a line of print and a semicolon separates data quoted on different labels. Holotype measurements are given in parentheses following the range for other specimens examined. Head/thorax length was measured from the anterior margin of the third antennal segment to the abdominal base. Wing length was measured from the humeral cross-vein to the wing-tip. All illustrations were drawn by me using a Wild M5 stereomicroscope with 2,0 X objective, and a drawing-tube.

Prior to dissection, the abdomen was either detached at its base (*Camilla*) or at the base of tergum 3 (*Teratocamilla*), by pushing upwards beneath the abdominal apex with the tip of a pin. It was then cleared in warm to hot KOH, so that the terminalia could be dissected free and examined/illustrated in glycerine. The abdomen and dissected terminalia were stored in glycerine in a microvial pinned beneath the source specimen.

Key to the southern African genera of Camillidae

[Illustrations of the abdominal form and bristling of *Afrocamilla* (similar to *Teratocamilla*) are provided in Barraclough (1992). This key refers only to diagnostic structures visible in undissected, pinned specimens.]

1 Arista virtually bare or pubescent. 1 strong dc. Disc of scutellum covered with short vestiture. Pteropleural bristle present.................... **Katacamilla** Papp, 1978

– Arista short- to long-plumose. 2 strong dc. Disc of scutellum bare. Pteropleural bristle absent 2

2 Wing membrane without markings, never with dark basal transverse fascia. Two sternopleural bristles. Abdomen without strikingly elongate bristles on posterior margin of tergum 2, although these sometimes longer than other tergal bristles; tergum 2 not exserted above level of terga 3–4, and base of tergum 3 not excavate .... **Camilla** Haliday, 1838

– Wing membrane with dark basal transverse fascia. One sternopleural bristle. Abdomen with strikingly elongate bristles on posterior margin of tergum 2, these much longer than other tergal bristles; tergum 2 exserted well above level of terga 3–4, base of tergum 3 deeply excavate and invaginated beneath posterior margin of tergum 2 3

3 Proclinate orbital bristle always absent (Fig. 1). Male with tergum 5 unusually well developed, length *in situ* subequal to or longer than tergum 4 and forming prominent hooded structure (Fig. 3) .... **Teratocamilla** gen. n.

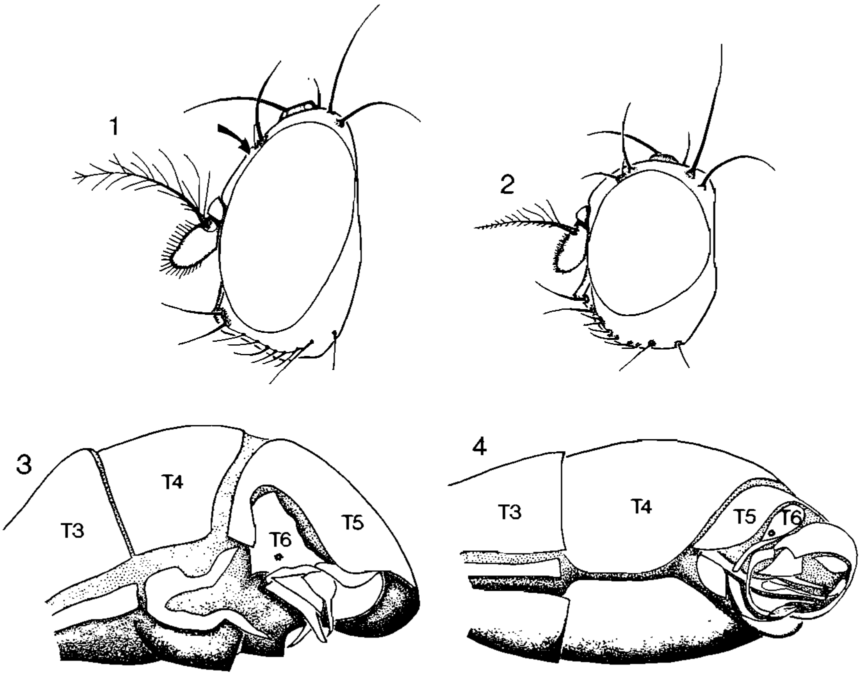
– Proclinate orbital bristle usually present (as in Fig. 2). Male with tergum 5 narrow and strip-like and usually barely visible *in situ*, very much shorter than length of tergum 4 (Fig. 4) .... **Afrocamilla** Barraclough, 1992

TAXONOMY

Teratocamilla gen. n.

Type species: *Teratocamilla sineseta* sp. n.

Etymology: *Teras-teratos* (Gr.) = monster. Refers to the unusually modified terga 5 and 6 of the male postabdomen. Gender feminine.



Figs 1–4. Characters of southern African Camillidae. 1–2. Head profile, showing major bristles and antennal vestiture. 1. *Teratocamilla sineseta* sp. n. (arrow indicates absence of proclinate orbital bristle). 2. *Camilla capensis* sp. n. 3–4. Male abdominal apex, lateroventral view, showing development of third (T3) to sixth (T6) terga (all vestiture omitted). 3. *Teratocamilla sineseta* sp. n. 4. *Afrocamilla stuckenbergi* Barraclough.

Description (based on both sexes):

Head (Fig. 1): Proclinate orbital bristle always absent. Arista long-plumose dorsally, longest ray ranging from slightly shorter to slightly longer than third antennal segment. Two well-developed vibrissae, these noticeably longer and stronger than adjacent peristomal bristles.

Thorax: Propleuron with very weak bristle on lower margin. Prostigmatic bristle absent. Mesopleuron with very few minute hairs near posterior margin; always 2 distinct bristles on posterior margin, reclinate lower bristle about 2 times length of anterodorsally positioned upper bristle. One strong upwardly directed sternopleural bristle. Pteropleural bristle absent. One supra-alar bristle. One or two postalars, medial bristle greatly reduced. Dorsocentrals well developed, anterior bristle about two-thirds length and strength of posterior bristle. Scutellum with 2 pairs marginal bristles, but lacking other vestiture.

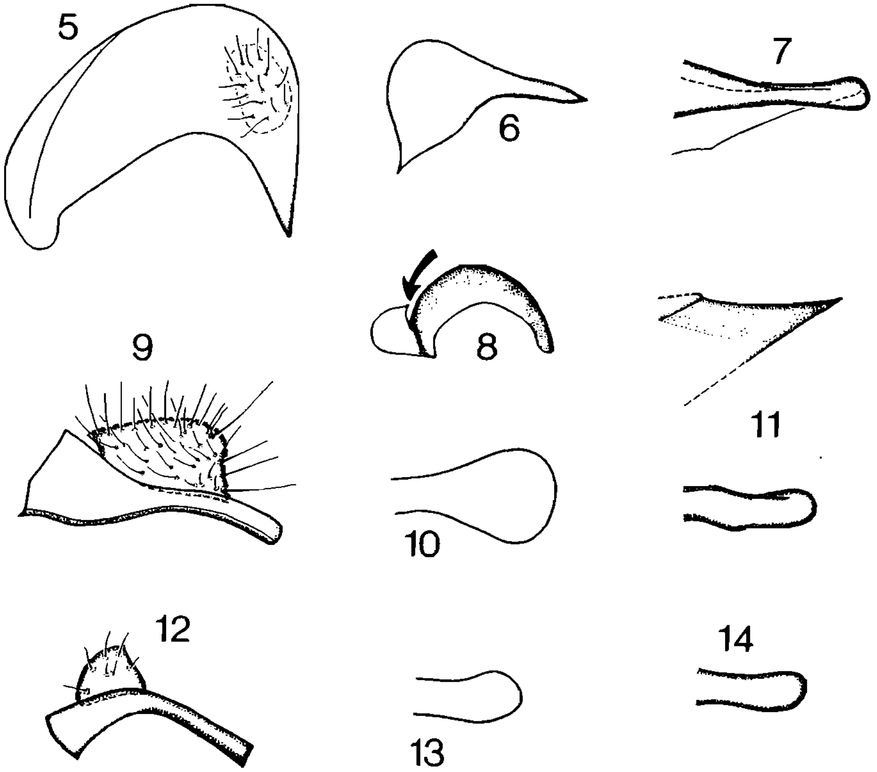
Legs: Fore femur with strong anteroventral spine. Fore tarsus form and vestiture not sexually dimorphic, basitarsus about twice length of second tarsal segment in both sexes. Tibiae all without dorsal pre-apical bristle.

Wing: Dark transverse fascia at level of humeral crossvein. Basal crossvein not developed, present as evanescence and reaching at most about half distance between cubital and medial sectors.

Abdomen: Terga 2–3 modified; tergum 2 bulbous and exserted above level of tergum 3; tergum 3 excavate and invaginated beneath posterior margin of tergum 2. Tergum 2 with pair of strikingly elongate bristles on posterior margin, these subequal to or slightly longer than subapical scutellar marginals.

Postabdomen: Tergum 5 (Fig. 3) modified in male to form a prominent hooded region without ventral extensions (except basally), always markedly exposed in dorsal view and profile, *in situ* length subequal to or slightly longer than that of tergum 4 (in female tergum 5 unmodified, although *in situ* length about half that of tergum 4). Male: Tergum 6 highly modified, heavily sclerotised, attached to hypandrial region by small sclerite, produced dorsally such that there is a large ‘incision’ in the basolateral region of tergum 5 (Fig. 3); cerci greatly reduced, visible as small barely sclerotised regions in membrane (Fig. 5); aedeagus slender. Female: spermathecae not visible, ventral receptacle present (moderately sclerotised), without slender tubular section adjacent to sclerotised region (Fig. 8).

Discussion: In my previous paper on African Camillidae (Barraclough 1992), *Afrocamilla* was described based mainly on three important character states unique to the genus. These were the presence of a dark transverse fascia across the base of the wing, the development of a strikingly elongate pair of marginal bristles on the posterior margin of tergum 2, and the unusual modification of terga 2 and 3 (the former being bulbous and exserted well above the level of tergum 3, which is excavate basally and invaginated beneath the posterior margin of tergum 2). I stated that these were likely autapomorphies defining the genus. Although *Teratocamilla* shares these character states, it is strongly distinguished from *Afrocamilla* based on characters of the male and female postabdomen, and it is likely that a cladistic analysis will identify autapomorphies defining each generic segregate. The most striking feature of *Teratocamilla* males is the unusually well-developed tergum 5, which has been stated to be greatly reduced in all extant Camillidae (McAlpine 1989). It is subequal to or slightly longer than tergum 4 and forms a prominent hooded structure (Fig. 3); in *Afrocamilla* it is narrow and strip-like and is usually barely visible *in situ* (generally only visible when the postabdomen is extruded) and is much shorter than tergum 4 (Fig. 4). Another remarkable feature of tergum 5 in *Teratocamilla* is the prominent indentation basolaterally on each side, into which a large and heavily sclerotised tergum 6 is inserted (Fig. 3). In *Afrocamilla* tergum 6 is divided into two small elongate-ovoid sclerites which are generally not attached to the hypandrium of the terminalia as is the case with *Teratocamilla*; tergum 6 abuts with the posterior margin of tergum 5, which is not indented in any way. Another feature which separates males of *Teratocamilla* from those of *Afrocamilla* is the greatly reduced cerci of the terminalia, which are weakly sclerotised and barely visible in the membrane above the epandrium (Fig. 5). In *Afrocamilla* the cerci are



Figs 5–14. Postabdominal characters of southern African Camillidae (vestiture included). 5–8. *Teratocamilla sineseta* sp. n. 5. Epandrium and cercus, profile. 6. Surstylus, profile. 7. Aedeagal epiphallus and postgonite (stippled perimeter), profile. 8. Female ventral receptacle (arrow indicates lack of slender, tubular region present in *Afrocamilla*). 9–11. *Camilla capensis* sp. n. 9. Epandrium and cercus, profile. 10. Surstylus, profile. 11. Aedeagal epiphallus (profile) and broadest view of postgonite (stippled perimeter). 12–14. *Camilla manningi* sp. n. 12. Epandrium and cercus, profile. 13. Surstylus, profile. 14. Postgonite, profile.

generally heavily sclerotised and prominent in profile (as in Fig. 9). In the female of *Teratocamilla* the postabdomen is elongate and largely membranous as in *Afrocamilla*, but the ventral receptacle is quite distinct. Unlike *Afrocamilla* the elongate and slender tubular section is lacking (Fig. 8).

Of particular interest is the complete loss of the proclinate orbital bristle in *Teratocamilla*. This is present in most *Afrocamilla* species, but is absent in at least two undescribed species.

Teratocamilla sineseta sp. n.

Figs 1, 3, 5–8

Etymology: *Sine* (L.) = without; seta = bristle. Refers to the complete loss of the proclinate orbital bristle.

Holotype ♂: SOUTH AFRICA: Cape Province: 'South Africa : Cape. / Hermanus Nature Res. / 23.ix.1979 3419AC / J. Londt Swept veget / stream banks & kloof'; 'HOLOTYPE ♂ / *Teratocamilla* / *sineseta* / BARRACLOUGH' [Rectangular card, red perimeter]. In NMSA (Type No. 595). In good condition.

Description:

Male: Head/thorax length 1,0–1,5 (1,5) mm; wing length 2,2–2,7 (2,7) mm.

Colour/Pollinosity: Head with bicolored frons, noticeably yellow to orange on anterior half and dark brown to black posteriorly; occiput entirely dark; lower half of postorbit and particularly cheek paler (yellow); antenna entirely yellow to orange, but arista dark; face, parafacial and epistome yellow, although face darker tinged; palpus yellow to pale brown; pollinosity noticeably present only on occiput (silver to pale brown). Thorax predominantly glossy, very dark brown to black, but much of humeral callus moderately paler; mesonotum with indistinct blue/green metallic reflections at certain angles; pollinosity distributed as follows: dense on posterior margin of scutellum (silver to pale brown) and rather sparse on propleural region and posterior third to half of entire pleuron. Ground colour of legs pale (yellow to medium brown); mid and hind femora with apical half to three-quarters darker brown tinged on certain surfaces. Wing membrane very pale brown infuscated; veins yellow to pale brown; transverse basal fascia not noticeably narrow anteriorly, relatively broad along much of width. Abdominal terga strikingly glossy with violet/blue reflections; tergum 2 brown pollinose over much of surface.

Head (Fig. 1): Eye margin gently curved anterodorsally in profile. Facial region relatively narrow in frontal view, width of face and parafacials at mid-height subequal to or slightly less than length of antenna. Antenna with short rays along ventral two-thirds to entire length of arista, longest dorsal rays reaching 0,9–1,0 X length of third antennal segment. Upper orbital plate relatively conspicuous anteriorly where dark colour contrasts with pale anterior section of frons, width 0,3–0,4 X that of ocellar triangle; anterior reclinate bristle present as a minute setula, about one-fifth length of posterior bristle. Cheek depth in profile 0,3–0,4 X length of third antennal segment.

Thorax: Scutellum with basal marginal bristles weakly developed, less than half length and strength of subapical marginals. Fore femur with irregularly developed posterodorsal and posteroventral rows of bristles, apical bristle (both dorsally and ventrally) positioned just distad of anteroventral spine, at least twice strength of more basal bristles. Wing not slender; sometimes with inconspicuous longer ventral spinules on costa between R_1 and R_{2+3}.

Postabdomen: Tergum 6 robust and well developed, roughly triangular, spiracular opening clearly visible (Fig. 3). Terminalia: Epandrium lacking vestiture, chevron-shaped in profile, very narrow anteriorly, maximum depth subequal to surstylus length (Fig. 5); aedeagal epiphallus and postgonites relatively closely approximated, both relatively slender basally, epiphallus sharply pointed and postgonite broader and smoothly rounded apically (Fig. 7); surstylus profile as in Fig. 6.

Female: Head/thorax length 1,2–1,5 mm; wing length 2,1–2,7 mm.

Colour/Pollinosity: Interfons sometimes not dark brown to black on posterior half, being noticeably paler than ocellar triangle. Antenna sometimes pale to medium brown, particularly on third segment

Postabdomen: Unremarkable, similar to that of *Camilla glabra* (Fallén) and *Afrocamilla stuckenbergi* Barraclough; ventral receptacle as in Fig. 8.

Material examined: SOUTH AFRICA: *Cape Province*: Paratypes: 1 ♀, Hermanus Nature Res., 3419AC, 23.ix.1979, J. Londt, Swept veget, stream banks & kloof (NMSA); 1 ♂, Katberg, x.1932, R. E. Turner, 4000 ft (BMNH). Other material: 1 ♂, same data as Katberg paratype (BMNH); 1 ♀, Somerset East, 10–22.xii.1930, R. E. Turner (BMNH).

Discussion: Although *Teratocamilla sineseta* is at present known only from three localities in the Cape Province (Fig. 15), it is likely to be widespread in South Africa. Nothing is known about its biology or immature stages.

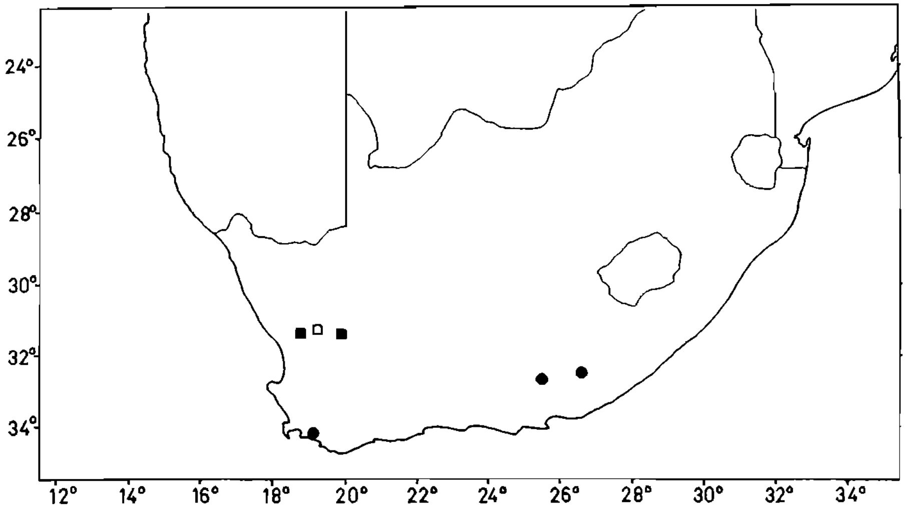


Fig. 15. Known distribution of *Teratocamilla sineseta* sp. n. (●), *Camilla capensis* sp. n. (■) and *C. manningi* sp. n. (□) in southern Africa.

Camilla Haliday, 1838

Camilla Haliday, 1838: 188 (as subgenus of *Diastata*). Type species: *Drosophila glabra* Fallén, 1823 (Holarctic), by monotypy.

Camilla is a predominantly Palaearctic genus, although the type species, *Camilla glabra*, has been introduced to the Nearctic Region (McAlpine 1960). There are 11 valid named species from the Palaearctic Region. *Camilla capensis* sp. n. and *C. manningi* sp. n. (see below) are the first two species described from the Afrotropical Region and the southern hemisphere. Cogan (1980) recorded the Mediterranean species *Camilla acutipennis* (Loew, 1865) as possibly from Kenya, but this seems unlikely and Papp (1985) also suggested this. There is no identified Afrotropical material of Camillidae deposited in the BMNH collections (Chainey, *pers. comm.*), so it is uncertain where Cogan saw Kenyan material of *Camilla*, although he may have been referring to a record in the literature. *Camilla* seems to be centred on the Mediterranean subregion, but is otherwise widely distributed through Europe into the North and Central European territories of the former U.S.S.R., with two outlying species described from Mongolia.

There is a striking discontinuity between the southernmost limits of the distribution of *Camilla* in the Palaearctic Region (the Mediterranean fringes of North Africa and the Canary Islands) and its presence in the Cape Province of South Africa. There are numerous examples of this type of bicentric distribution in the acalyptrate Diptera. A comparable one is that of *Opomyza* Fallén (Opomyzidae), which is distributed between Europe/Asia and the southwestern Cape (Stuckenberg 1963 1982). Stuckenberg (1980) suggested that the South African species of this genus appear to be relatively recent elements in the regional fauna. It is interesting to note that the *Camilla* species described below have been collected only in Karoo scrubland (rocky substrate, sparse grasses and stunted shrubs) and may prove to be absent from *Protea*-dominated Cape fynbos.

The reasons for such discontinuous distributions have not been definitely established, although Stuckenberg (1982) suggested that such regions may have been bridged during the Pleistocene by the dispersal of pertinent taxa along mountain ranges through the tropics. Much more collecting of African Camillidae is required before this can be confirmed or refuted. The possibility exists that *Camilla* has a much wider distribution in Africa than is currently supposed.

Of particular interest are the two probably derived character states of *C. capensis* and *C. manningi*. The more important of these is the absence of the small pre-apical dorsal bristle on the mid tibia; this is developed in all Palaearctic species (Papp 1984 1985: 285). The other is the absence of an anteroventral spine on the fore femur (sometimes also absent in *C. acutipennis*). Another possible apomorphy shared by *capensis* and *manningi* could be the loss in sclerotisation of the spermathecae, although it is not certain that all Palaearctic species of *Camilla* have visibly sclerotised spermathecae.

Key to southern African species of *Camilla*

1 Arista with longest dorsal rays subequal to width of third antennal segment (Fig. 2). Cheek paler than remainder of head; thoracic pleuron paler than mesonotum.

Femora entirely pale yellow. Male terminalia as in Figs 9–11; cerci contiguous medially, vestiture conspicuous and elongate; surstylus markedly broad apically, maximum width here 3,0 X that at base .... **capensis** sp. n.

– Arista with longest dorsal rays about half to two-thirds width of third antennal segment. Cheek concolorous with remainder of head; thoracic pleuron and mesonotum both dark brown to black. Femora dark yellow, except brown-tinged on part or all of apical half to three-quarters. Terminalia as in Figs 12–14; cerci broadly separated medially, vestiture inconspicuous and short; surstylus slightly broader apically, maximum width here 1,5 X that at base .... **manningi** sp. n.

Camilla capensis sp. n.

Figs 2, 9–11

Etymology: Refers to the Cape Province of South Africa, where all known specimens of this species have been collected.

Holotype ♂: SOUTH AFRICA: Cape Province: 'KNERSVLAKTE NORTH / OF VAN RHYNSDORP / SOUTH-WEST CAPE / 6-9 OCTOBER 1964 / B & P STUCKENBERG'; 'HOLOTYPE ♂ / *Camilla capensis* / BARRACLOUGH' [Rectangular label, red perimeter]. In NMSA (Type No. 596). In good condition, except right wing moderately torn apically and left wing slightly so.

Description (based on male):

Head/thorax length 1,2–1,3 (1,3) mm; wing length 1,9–2,1 (2,1) mm.

Colour/Pollinosity: Head mostly very dark brown, but cheek and often lower third of occiput paler brown; frons noticeably glossy, pollinosity restricted to occipital region (pale brown). Thorax medium to dark brown, paler on pleuron; pollinosity indistinct, most noticeable on scutellum (pale brown), sometimes also on anterior extremity of pleuron and on posterior third. Legs entirely pale (yellow), except apical tarsal segment slightly darker brown. Wing very pale brown infuscated, veins pale yellow. Abdomen entirely dark brown to black with indistinct violet reflections, mostly glossy but tergum 1 with pollinosity apparent at certain angles.

Head (Fig. 2): First antennal segment concealed, not visible in profile or frontal view. Third antennal segment usually smoothly and evenly rounded apically, dorso-apical section with relatively long pubescence. Arista with inconspicuous ventral rays on apical half, length of these at most subequal to width of arista at base, longest dorsal rays subequal in length to antennal width in profile. Width of face and parafacials at mid-height about 0,9–1,1 X length of antenna. Two vibrissae, at least twice length and strength of adjacent peristomal bristles. Vibrissal angle not prominent, about coincident with anterior extent of profrons in profile. Cheek depth in profile 0,8–1,0 X length of third antennal segment. Occiput with upper half extensively excavate.

Thorax: Anterior sternopleural bristle present, about half length and strength of posterior bristle. Scutellar marginal bristles of similar strength, subapical bristle slightly longer than basal bristle. Fore femur without anteroventral spine, sometimes with minute setula. Mid tibia without dorsal pre-apical bristle. Wing moderately broad, slightly pointed apically although much less strikingly so than *C. acutipennis*.

Costal vestiture between R_1 and R_{2+3} relatively short and sparse, sometimes with longer spinules differentiated.

Postabdomen: Tergum 5 with broader ventral extremities, setulae present along posterior margin dorsally, but more extensively so over ventral sections. Tergum 6 virtually separated into 2 elongate-ovoid sclerites, still connected dorsally by narrow vestige of sclerite. Epandrium markedly narrowed anteriorly, depth in profile only about one-third that near posterior margin (Fig. 9). Cerci well-developed, contiguous and broad, width subequal to length; vestiture conspicuous and elongate. Epiphallus sharply tapered to point-like apical region (Fig. 11). Postgonites (in specimen examined) splayed outwards, perpendicular to aedeagus, slender and finger-like although slightly broader both apically and basally, length about 4,0 X width, no apparent vestiture (Fig. 11). Surstylus club-shaped, slender basally but much broader apically (almost 3,0 X basal width), apical region smoothly rounded, no apparent vestiture (Fig. 10).

Material examined: SOUTH AFRICA: *Cape Province*: Paratype: 1 ♂, Calvinia, 3119BD, 27.ix.1977, Raymond M. Miller, 988 m, Malaise trap (NMSA).

Discussion: This species appears to be restricted to a small but ecologically varied region of the southwestern Cape (Fig. 15), well known for its endemic taxa. Further collecting may extend its range, although I believe this is unlikely.

Camilla capensis has close affinity with *C. manningi*, but its relationships are otherwise uncertain. In Papp's 1985 key to the world species of Camillidae it will not run beyond the second couplet (dorsal pre-apical bristle absent). As stated above, the Mediterranean species *C. acutipennis* is the only other named species in which the anteroventral spine of the fore femur is sometimes lacking, and I believe *capensis* may have distant affinity with *acutipennis*.

The holotype's abdomen (exclusive of the terminalia) was lost after the completion of the description. If the colour/pollinosity of the abdomen and the structure of terga 5 and 6 need to be examined, the male paratype is available for study.

Camilla manningi sp. n.

Figs 12–14

Etymology: This species is named in gratitude for Dr John Manning, collector of the holotype and type series.

Holotype ♂: SOUTH AFRICA: Cape Province: 'SOUTH AFRICA: Cape Prov. / Klipkoppie, 6.ix.1992 / 31°21'S : 19°08'E / 790 m / Nieuwoudtville Wild / Flower Res. J. Manning'; 'HOLOTYPE ♂ / *Camilla manningi* / BARRACLOUGH' [Rectangular label, red perimeter]. In NMSA (Type No. 598). In fairly good condition, but wings folded.

Description (based on both sexes):

Head/thorax length 1,1–1,6 (1,4) mm; wing length 1,7– 2,7 (2,4) mm.

Colour/Pollinosity: Head almost entirely very dark brown to black, but antenna (particularly third segment) partly dark orange; frons noticeably glossy, pollinosity restricted to occipital region (silver to pale brown). Thorax dark brown to black, not paler on pleuron; pollinosity very indistinct, most noticeable on anterior extremity of pleuron and posterior third. Legs with dark yellow ground colour, but apical half to three-quarters of femora noticeably brown-tinged and apical tarsal segment dark brown. Wing colour and abdominal colour/pollinosity as in *capensis*.

Head: First antennal segment partly concealed, not visible in profile, but often partly so in frontal view. Third antennal segment smoothly and evenly rounded apically, dorso-apical pubescence as in *capensis*. Arista with or without very inconspicuous rays on ventral half- to two-thirds, length of these subequal to or less than width of arista at base, longest dorsal rays about half to two-thirds antennal width in profile. Width of face and parafacials at mid-height about 1,1–1,3 X length of antenna. Vibrissae as in *capensis*. Vibrissal angle slightly prominent, usually anterior to anterior extent of profrons in profile. Cheek depth in profile 1,0–1,2 X length of third antennal segment. Occiput as in *capensis*.

Thorax: As in *capensis* except scutellum with subapical bristle sometimes noticeably longer than basal bristle; wing moderately broad, usually smoothly rounded apically, occasionally very slightly pointed.

Postabdomen: Tergum 5 with dorsal section and ventral extremities of similar width, setulae not evident along posterior margin dorsally but relatively extensive over ventral sections. Tergum 6 narrow and strip like, not separated into 2 elongate-ovoid sclerites lateroventrally. Epandrium slender, but narrowed anteriorly, depth in profile at most one-half that near posterior margin (Fig. 12). Cerci weakly developed, not contiguous, strikingly separated by membrane medially, width subequal to length, vestiture inconspicuous and short. Epiphallus tapered to point-like apical region, similar to *capensis*. Postgonites (in specimen examined) not splayed outwards or perpendicular to aedeagus, relatively slender and thumb-like, slightly broader apically, length about 3,0-4,0 X width, no apparent vestiture (Fig. 14). Surstylus narrowly club-shaped, only slightly broader apically (about 1,5 X basal width), apical region smoothly rounded, no apparent vestiture (Fig. 13).

Material examined: SOUTH AFRICA: *Cape Province*: 6 paratypes (1 ♂ 1 ♀ dissected), Klipkoppie, Nieuwoudtville Wild Flower Reserve, 31°21'S:19°08'E, 6.ix.1992, J. Manning, 790 m (NMSA); 1 specimen, Strandfontein, Groot Sandleegte, 3418BA [= 30°58'S:18°12'E], 10–12.x.1977, R. M. Miller (NMSA).

Discussion: I have excluded the Strandfontein specimen from the type series as it is in poor condition (wings torn) and has subtly different coloration from the Klipkoppie paratypes. Unlike the paratypes the cheek is noticeably paler than the rest of the head and the femora are indistinctly brown-tinged.

The paratypes were collected from the faecal pellets of *Procavia capensis* in a relatively arid area with dolerite outcrops. Hyraxes have also been observed beneath rocky overhangs in the Nieuwoudtville area (Duxbury, *pers. comm.*).

ACKNOWLEDGEMENTS

Dr John Manning (Botanical Research Institute, Kirstenbosch) kindly collected material of *Camilla* for me whilst on a botanical field-trip in Namaqualand. I acknowledge the loan of *Teratocamilla* specimens (identified as Diastatidae) from

BMNH, organised by Mr John Chainey. This research was facilitated by a grant from the Foundation for Research Development. Dr Brian Stuckenberg (Director, Natal Museum) and Mr Andrew Whittington (Entomology Dept, Natal Museum) kindly reviewed earlier drafts of this paper.

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Date received: 31 October 1992

ADDENDUM

Shortly before the printing of this paper, I received 6 ♂ 7 ♀ of *Teratocamilla sinesta* from Dr T. A. Wheeler, Postdoctoral Fellow, Department of Biology, Carleton University, Ottawa, Canada. All these specimens are here designated as additional paratypes of *sineseta* and are deposited in the Canadian National Collections (CNCI), Ottawa. Label data are: SOUTH AFRICA: *Natal:* Rainbow Gorge, Cathedral Peaks [sic] For. Sta. [28°55'S:29°09'E], 75 km WSW Estcourt, 10–18.xii.1979, S. & J. Peck, Podocarp For, 1 500 m, dung cup traps. These paratypes are in fairly good condition, although apparently pinned from ethanol and some are teneral.